

Patent Claims:

- 1) Method for the production of antifalsification identification elements each comprised of at least one layer reflecting electromagnetic waves, one spacer layer and one layer formed of metallic clusters, wherein onto a carrier substrate a partial or all-over layer reflecting electromagnetic waves and subsequently one or several partial and/or all-over polymeric layers of defined thickness are applied, whereupon onto the spacer layer a layer formed of metallic clusters is applied, which is produced by means of a method of vacuum technology or out of solvent-based systems.
- 2) Method for the production of antifalsification identification elements each comprised of at least one layer reflecting electromagnetic waves, one spacer layer and one layer formed of metallic clusters, wherein onto a carrier substrate a layer formed of metallic clusters is applied, which is produced by means of a method of vacuum technology or out of solvent-based systems, and subsequently one or several partial and/or all-over polymeric layers of defined thickness are applied, whereupon one partial or all-over layer reflecting electromagnetic waves is applied onto the spacer layer.
- 3) Method as claimed in one of claims 1 or 2, characterized in that onto a first carrier substrate a layer reflecting electromagnetic waves and subsequently a polymeric spacer layer is applied, and onto a second carrier substrate a cluster layer, wherein, first, by connecting the two carrier substrates thus coated, the antifalsification identification element is generated or can be detected.

- 4) Method as claimed in one of claims 1 to 3, characterized in that onto the cluster layer a protective layer is applied.
- 5) Method as claimed in one of claims 1 to 4, characterized in that the layer onto which the spacer layer is applied, is modified by treatment with oxidizing fluids or by a PVD or CVD process.
- 6) Method as claimed in one of claims 1 to 5, characterized in that the polymeric spacer layer is structured through decrosslinking effects.
- 7) Method as claimed in claim 6, characterized in that the decrosslinking structures of the structured polymeric spacer layer are converted into unique codes by means of fingerprint algorithms.
- 8) Method as claimed in one of claims 1 to 7, characterized in that the polymeric spacer layer is modified by treatment with sodium hypochlorite, through a PVD or a CVD process.
- 9) Method as claimed in one of claims 1 to 8, characterized in that the polymeric spacer layer comprises a chromophore.
- 10) Method as claimed in one of claims 1 to 9, characterized in that the metallic cluster layer is deposited by sputtering or vapor deposition.